

## Chapter 8. State Indicators

### 8-6 Eighth Grade Mathematics Proficiency

#### Description

This indicator represents the proportion of a state's eighth grade students in public schools that met or exceeded the proficiency standard in mathematics. The National Assessment Governing Board sets performance standards that provide a context for interpreting National Assessment of Educational Progress (NAEP) results. The standards define "proficiency," as well as "advanced" and "basic" accomplishment. For the eighth grade, the basic level (scores 262–298) denotes partial mastery of knowledge and skills that are prerequisite for proficient work. The proficient level (299–332) represents solid academic performance and demonstrates competency over challenging subject-matter knowledge. The advanced level (333–500) signifies superior performance.

The National Center for Education Statistics has determined that achievement levels are to be used on a trial basis and should be interpreted with caution. However, both the Commissioner of Education Statistics and the National Assessment Governing Board state these performance standards are useful for understanding trends in student achievement.

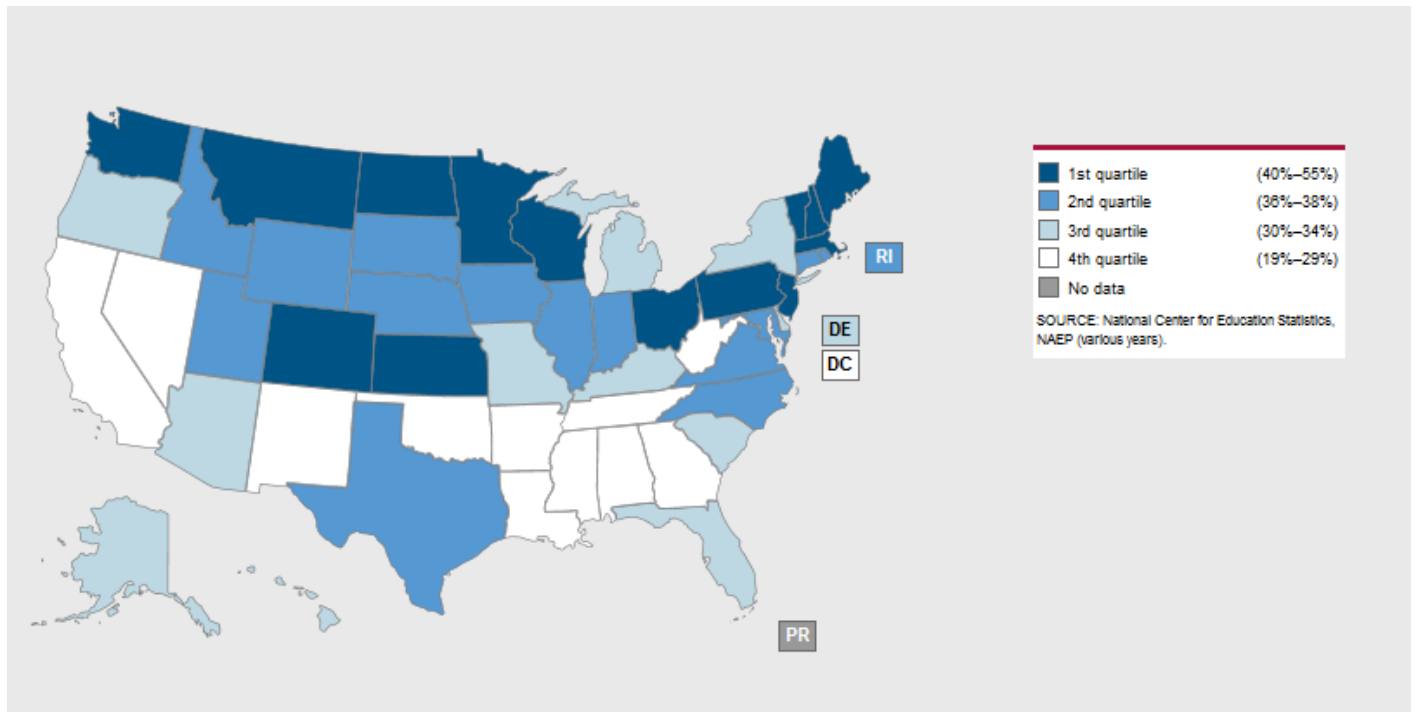
Approximately 164,600 eighth grade students in 6,200 schools participated in the 2013 NAEP mathematics assessment. Students with disabilities or limited English-language proficiency were allowed to use certain accommodations (e.g., extra testing time or individual rather than group administration). All data presented here represent scores from tests taken with accommodations offered.

#### Findings

- In 2013, 34% of eighth grade students nationwide performed at or above the proficient level in mathematics, an increase from 27% in 2003.
- Relative to 2003, none of the statewide percentages were lower in 2013; almost all were higher in 2013. Statewide percentages in Connecticut, Iowa, Michigan, New York, and Oregon were not significantly different in 2013 than in 2003.
- Nationally, the percentage of eighth grade white students demonstrating proficient performance in mathematics was 44% in 2013 compared to 14% for black students, a gap of 30 percentage points, and 21% for Hispanic students, a gap of 23 percentage points, based upon racial classifications provided by the schools. In 2003, these gaps were 29 and 25 percentage points, respectively.
- In 2013, the percentage of Asian and Pacific Islander students demonstrating proficient performance was 60% compared to 44% for white students, a gap of 16 percentage points. The gap has risen since 2003 when it was 6 percentage points.
- The percentage of eighth grade students proficient in mathematics increased for both sexes between 2003 and 2013, and the gender gap decreased from 3 percentage points to 1 percentage point during this period.

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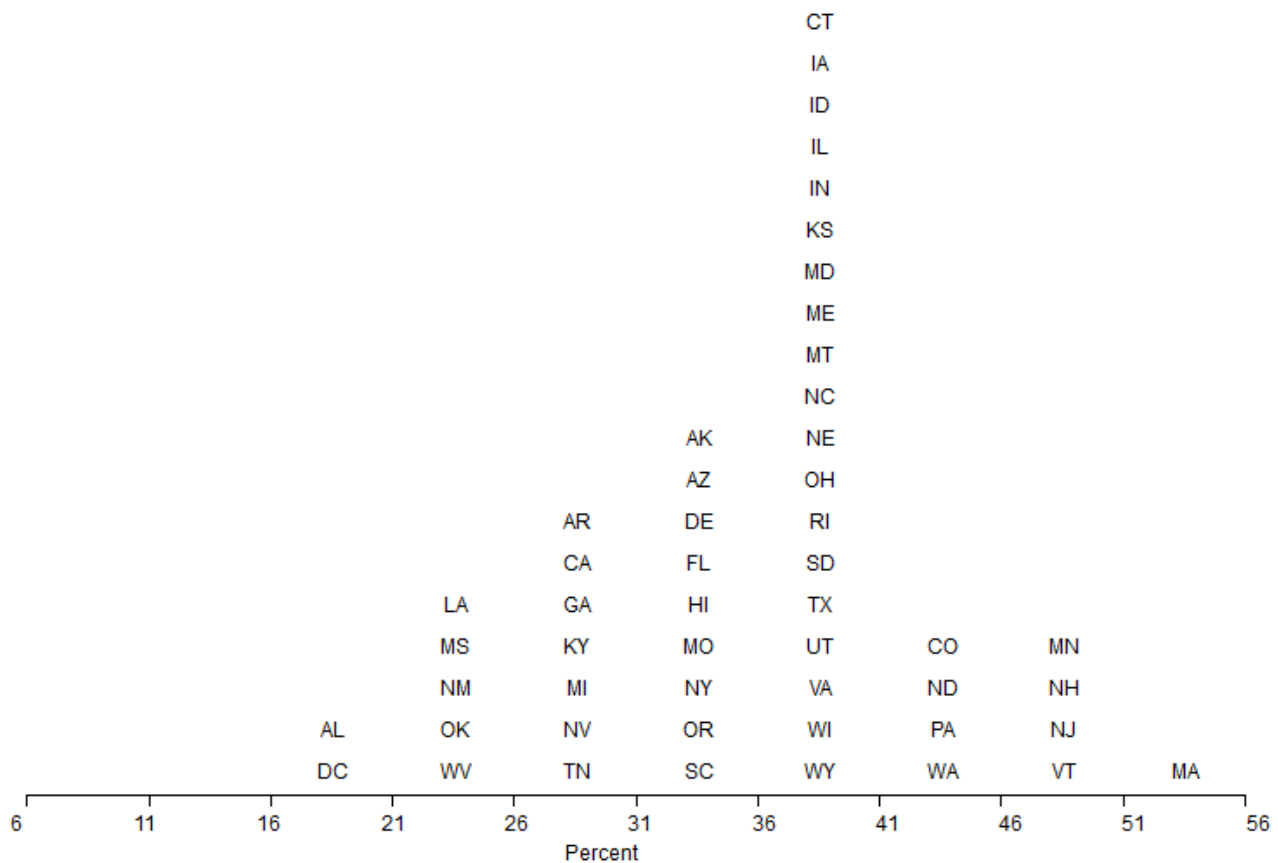
Year: 2013



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### Distribution of states across indicator values



Histograms do not display states with extreme values. Please consult the data tables for exact indicator values for each state.

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**Table 8-6** Eighth Grade Mathematics Proficiency

State	8th grade math proficiency, all students (Percent)						
	2000	2003	2005	2007	2009	2011	2013
United States	25	27	28	31	33	34	34
Alabama	16	16	15	18	20	20	20
Alaska	NA	30	29	32	33	35	33
Arizona	20	21	26	26	29	31	31
Arkansas	13	19	22	24	27	29	28
California	17	22	22	24	23	25	28
Colorado	NA	34	32	37	40	43	42
Connecticut	33	35	35	35	40	38	37
Delaware	NA	26	30	31	32	32	33
District of Columbia	6	6	7	8	11	17	19
Florida	NA	23	26	27	29	28	31
Georgia	19	22	23	25	27	28	29
Hawaii	16	17	18	21	25	30	32
Idaho	26	28	30	34	38	37	36
Illinois	26	29	29	31	33	33	36
Indiana	29	31	30	35	36	34	38
Iowa	NA	33	34	35	34	34	36
Kansas	34	34	34	40	39	41	40
Kentucky	20	24	23	27	27	31	30
Louisiana	11	17	16	19	20	22	21
Maine	30	29	30	34	35	39	40
Maryland	27	30	30	37	40	40	37
Massachusetts	30	38	43	51	52	51	55
Michigan	28	28	29	29	31	31	30
Minnesota	39	44	43	43	47	48	47

State	8th grade math proficiency, all students (Percent)						
	2000	2003	2005	2007	2009	2011	2013
Mississippi	9	12	14	14	15	19	21
Missouri	21	28	26	30	35	32	33
Montana	36	35	36	38	44	46	40
Nebraska	30	32	35	35	35	33	36
Nevada	18	20	21	23	25	29	28
New Hampshire	NA	35	35	38	43	44	47
New Jersey	NA	33	36	40	44	47	49
New Mexico	12	15	14	17	20	24	23
New York	24	32	31	30	34	30	32
North Carolina	27	32	32	34	36	37	36
North Dakota	30	36	35	41	43	43	41
Ohio	30	30	33	35	36	39	40
Oklahoma	18	20	21	21	24	27	25
Oregon	31	32	34	35	37	33	34
Pennsylvania	NA	30	31	38	40	39	42
Rhode Island	22	24	24	28	28	34	36
South Carolina	17	26	30	32	30	32	31
South Dakota	NA	35	36	39	42	42	38
Tennessee	16	21	21	23	25	24	28
Texas	24	25	31	35	36	40	38
Utah	25	31	30	32	35	35	36
Vermont	31	35	38	41	43	46	47
Virginia	25	31	33	37	36	40	38
Washington	NA	32	36	36	39	40	42
West Virginia	17	20	18	19	19	21	24
Wisconsin	NA	35	36	37	39	41	40
Wyoming	23	32	29	36	35	37	38
Puerto Rico	NA	NA	NA	NA	NA	NA	NA



8th grade math proficiency, all students (Percent)

State	2000	2003	2005	2007	2009	2011	2013
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NA = not available.

NOTES: The National Assessment of Educational Progress (NAEP) scores are for public schools only. The national value for the United States is the reported value in the NAEP reports.

SOURCE: National Center for Education Statistics, NAEP (various years).

*Science and Engineering Indicators 2016*